

Claims

1. A method of attaching a flip-chip to substrate, the method including forming an insulating layer of an insulating material on the lateral sides of the electrical contacts of the flip-chip and the substrate, and joining the flip-chip to the substrate using a matrix of insulating material including conductive particles.
2. A method according to claim 1 in which the insulating layer on the lateral sides of the electrical contacts of the flip-chip is formed by coating a layer of insulating material onto the surface of the flip-chip including the electrical contacts, curing the layer, and then removing the portions of the layer overlying the electrical contacts by polishing.
3. A method according to claim 1 or claim 2 in which the insulating layer on the lateral sides of the electrical contacts of substrate is formed by coating a layer of insulating material onto the surface of the substrate including the electrical contacts, exposing portions of the layer which do not overlie the electrical contacts to electromagnetic radiation to cure it, and then removing the uncured portions of the layer to expose the electrical contacts.
4. A combination of a flip-chip and a substrate, the flip-chip being oriented with a surface of the flip-chip including electrical contacts facing a surface of the substrate including corresponding electrical contacts, the electrical contacts of the flip-chip and substrate having electrically insulating films on their lateral sides, the combination further including between the flip-chip and the substrate a matrix of insulating material including electrically conductive particles.